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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/826,215

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Brian Hang Yang

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EXAMINER

MAHMOUDZADEH, NIMA

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2419

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/826,215	Applicant(s) YANG ET AL.	
	Examiner NIMA MAHMOUDZADEH	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8, and 10-14 is/are rejected.
- 7) ☒ Claim(s) 3-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1- 8, and 10- 14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1 ,8 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Busi et al. (US Patent Publication No. 2003/0074469) in view of Fernandez et al. (US Patent No. 4,893,305).

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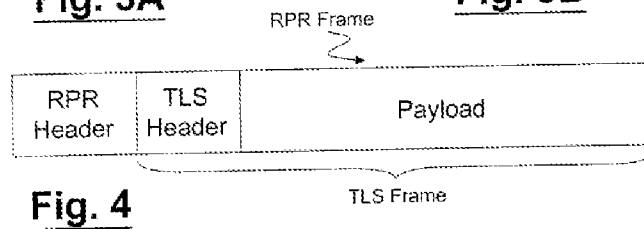
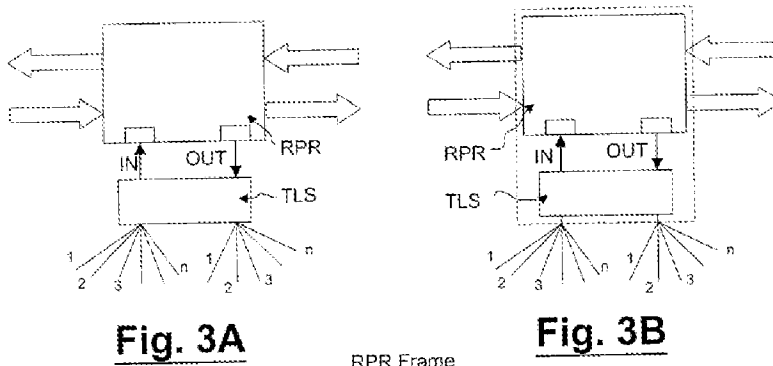
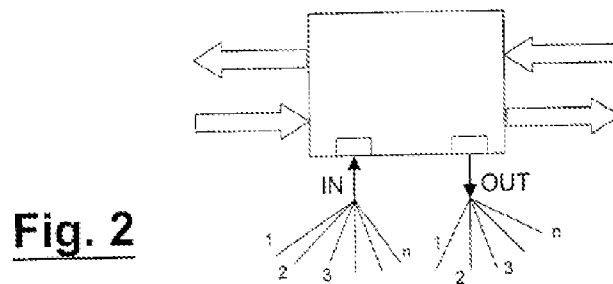
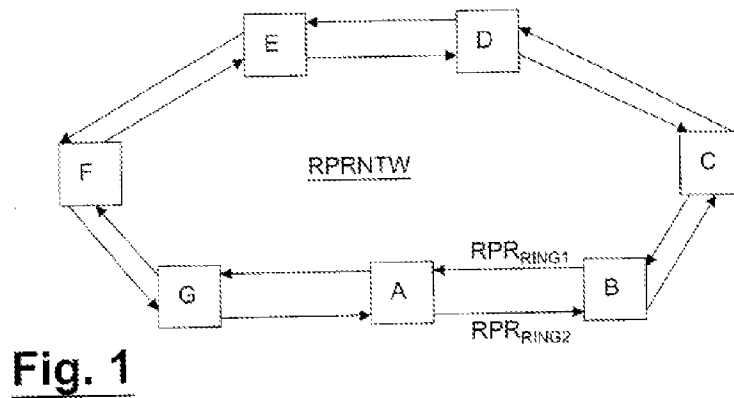
Regarding claim 1, (Currently Amended) Busi et al. teach a stacked switch using a resilient packet ring protocol comprising:

a plurality of switch modules coupled to one another in a ring topology (See Fig. 1 below) and each having a plurality of external terminals for interfacing with external devices (See Fig. 2 below), where each switch module includes:

an external interface for communicating with the external terminals (Fig. 2 as shown below), the external interface configured to communicate using a communication protocol (Figs. 3A and 3B see below); and

an internal interface for communicating with other switches (Fig. 2 shown below), the internal interface using a resilient packet ring (RPR) protocol (Fig. 2 shown below);

wherein statistics associated with a communication of data through at least one of the switch modules are stored (Paragraph [0079]);



but fail to teach the device wherein the statistics are evaluated to generate a link signal representative of desired links/ports to be aggregated; and

wherein a link aggregation port is selectively aggregated to respond to the link signal and to dynamically set one or more switch modules' external terminals to selectively aggregate information to and from the switch modules;

wherein marker information is selectively introduced into the data to ensure that the integrity of the data is reasonably maintained when a link aggregation is modified. However, Fernandez et al. teach the device wherein the statistics are evaluated to generate a link signal representative of desired links/ports to be aggregated (Column 5, lines 22-29 which discloses the aggregation which is done according to the data captured from the channels); and

wherein a link aggregation port is selectively aggregated to respond to the link signal and to dynamically set one or more switch modules' external terminals to selectively aggregate information to and from the switch modules (Column 5, lines 34-58);

wherein marker information is selectively introduced into the data to ensure that the integrity of the data is reasonably maintained when a link aggregation is modified (Column 3, lines 5-32 discloses codes that can be interpreted as markers which gives out the status of the ports).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Busi et al. to include aggregation features disclosed by Fernandez et al. in order to be able to manage the port's traffic more effective and decrease congestion.

Regarding claim 8, (Currently Amended) Busi et al. teach a method of switching

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data through a stacked switch using a resilient packet ring protocol (Fig. 1), the stacked switch having a plurality of modules (Fig. 1), where each module includes an external interlace for communicating with external terminals and an internal interface for communicating with other switches using a resilient packet ring (RPR) protocol (Fig. 1 and Fig. 2), comprising:

storing statistics associated with a communication of data through at least one module in a switch (Paragraph [0079]);

But fail to teach a method comprising: evaluating the statistics to generate a link signal representative of desired links/ports to be aggregated;

selectively activating a link aggregation port to respond to the link signal and to dynamically set one or more switch modules' external terminals to selectively aggregate information to and from the switch modules; and

selectively introducing marker information into the data to ensure that the integrity of the data is reasonably maintained when a link aggregation is modified.

However, Fernandez et al. teach a method comprising: evaluating the statistics to generate a link signal representative of desired links/ports to be aggregated (Column 5, lines 22-29 which discloses the aggregation which is done according to the data captured from the channels);

selectively activating a link aggregation port to respond to the link signal and to dynamically set one or more switch modules' external terminals to selectively aggregate information to and from the switch modules (Column 5, lines 34-58); and

selectively introducing marker information into the data to ensure that the integrity of the data is reasonably maintained when a link aggregation is modified (Column 3, lines 5-32 discloses codes that can be interpreted as markers which gives out the status of the ports).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Busi et al. to include aggregation features disclosed by Fernandez et al. in order to be able to manage the port's traffic more effective and decrease congestion.

Regarding claim 9, (Canceled)

Regarding claim 10, Busi et al. in view of Fernandez et al. teach the method of claim 8, Fernandez et al. further teach the method wherein the statistics are based on port traffic (Column 5, lines 22-29 which discloses the aggregation which is done according to the data captured from the channels).

Regarding claim 11, Busi et al. in view of Fernandez et al. teach the method of claim 8, Fernandez et al. further teach the method further comprising sending a marker to facilitate handover from a first port to a second port (Column 3, lines 5-32).

Regarding claim 12, Busi et al. in view of Fernandez et al. teach the method of claim 8, Fernandez et al. further teach the method wherein local ports on the switch are aggregated (Column 5, lines 34-58).

Regarding claim 13, (New) Busi et al. in view of Fernandez et al. teach the method of claim 10, Fernandez et al. further teach the method wherein the statistics are used for load-balancing purposes (Column 5, lines 34-58).

Regarding claim 14, (New) Busi et al. in view of Fernandez et al. teach the method of claim 11, Fernandez et al. further teach the method wherein a marker technique is employed to prevent an out-of-order problem when handing over traffic from the first port to the second port (Column 3, lines 5-32).

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Busi et al. (US Patent Publication No. 2003/0074469) in view of Fernandez et al. (US Patent No. 4,893,305) further in view of Dai et al. (US Patent No. 6,246,692).

Regarding claim 2, (Previously Presented) Busi et al. in view of Fernandez et al. teach the stacked switch of claim 1, but fail to teach the device wherein each switch module further includes: a controller coupled to the external interface and the internal interface and configured to selectively communicate information between the external interface and the internal interface. However, Dai et al. teach the device wherein each switch module further includes:

a controller coupled to the external interface and the internal interface and configured to selectively communicate information between the external interface and the internal interface (Fig. 2, element 100).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the device of Busi et al. in view of Fernandez et al. to include controller taught by Dai et al. in order to increase the precision of the communication and decrease the congestion efficiently.

Allowable Subject Matter

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5. Claims 3-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIMA MAHMOUDZADEH whose telephone number is (571)270-3527. The examiner can normally be reached on Monday - Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag G. Shah can be reached on (571) 272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NIMA MAHMOUDZADEH/

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Examiner, Art Unit 2419

/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2419